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McGarry Bair LLP

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Examiner:

Judson Jones

Group Art Unit: 2834

Allowable subject matter -

Applicants acknowledge with thanks the Examiner's determination of allowable subject matter. It is noted that the comments regarding allowability of claims 2 and 3 are in error as confirmed by a telephone conversation between the Examiner and the undersigned on 15 October 2002. Some of the subject matter of the claims deemed allowable has been carried forward into the new claims, although the new claims do not include a direct rewriting of the allowable dependant claims (now canceled).

Nevertheless, it is believed that the new claims are clearly allowable over the art of record. Each of independent claims 19, 39, 57, 65, 66, 68, and 70 includes a limitation that the support is capable of "two dimensional motion in a single plane" or equivalent. This phrase, as understood in the specification, is intended to mean that the support moves relative to the magnet in a single plane in a direction that can be resolved into two orthogonal vectors (e.g. X and Y axes in that plane). In other words, the support is capable of movement in any direction within the single plane. In additional to linear motion in a given direction, it may include an orbital type motion where the support appears to orbit about an axis. Although the invention is also capable of motion where the support appears to rotate about an axis, there is nothing to restrict motion of the support relative to the magnet to rotational movement. Such motion is incapable of two dimensional motion in a single plane. As recognized by the Examiner, Smith does not show a support capable of two-dimensional motion in a plane. Likewise, Shiraki does not show a support capable of two-dimensional motion relative to a magnet. The armature 6 of Shiraki is rotatably mounted to the shaft 20, and rotates relative to the magnet 15. Its eccentricity provides vibration as it rotates, but any induced vibration does not change the relative motion of the armature and the magnet. In any event, the rotational motion and the induced vibration motion are not in the same plane. Similarly, the rotor vane 7 of Clifford is rotatably mounted to the shaft 11 for rotation and is incapable of two-dimensional motion relative to the magnet 12.

Moreover, none of the cited references teach or suggest this limitation in an electric machine and therefore, claims 19, 39, 57, 65, 66, 68, and 70 are allowable over the art of record.

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As well, all claims dependant from claims 19, 39, 57, 65, 66, 68, and 70 are also allowable.

New independent claim 67 includes a limitation that the movable support is provided with two sets of electrical conductors each having segments which lie in respective non-parallel planes. It is readily apparent from the drawings that in Smith all of the conductors lie in parallel planes, as they do in Shiraki and Clifford. Also, independent claim 71 includes a limitation of the support being provided with a plurality of segments that lie in a plane substantially perpendicular to a plane of the support, and further that thrust forces created by the interaction of magnetic flux and electric currents produce thrust forces acting along an axis perpendicular to a plane of the support. However in the cited references, all of the segments are in the plane of the support and the forces created by the interaction of magnetic fields and electric currents act in a plane of the support, not perpendicular to it. Yet further, independent claim 72 has a limitation that the support is provided with at least two electrically conductive paths in a first plane and at least two electrically conductive paths in a second plane not parallel to the first plane. Again such features are not disclosed or featured in the cited references. Thus, all of claims 67, 71, 72 and the claims dependant therefrom are allowable over the art of record.

It is believed that the application is now in condition for allowance and prompt notice of allowability is respectfully requested. Any questions concerning the amendments or the application can be directed to the undersigned by email or by telephone.

Respectfully submitted,

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Dated: 22 October 2002

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